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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,847	11/12/2003	Bradley Krantz	2267.685US02	6083
24113	7590	10/05/2005	EXAMINER	
PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.				HUSON, MONICA A
4800 IDS CENTER				ART UNIT
80 SOUTH 8TH STREET				PAPER NUMBER
MINNEAPOLIS, MN 55402-2100				1732

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/706,847	KRANTZ ET AL.
	Examiner Monica A. Huson	Art Unit 1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 November 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-14 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 12 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0802044</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-9, 11, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Christensen et al. (U.S. Patent 3,095,613). Regarding Claim 1, Christensen et al., hereafter “Christensen,” show that it is known to carry out a method of forming a sweep elbow fitting having a bend portion and two straight portions (Figure 1), the method comprising the steps of inserting a first segmented mold core, having a plurality of segments, including a first segment and a second segment, the mold core having a bend portion and a straight portion, into the cavity (Figure 5, elements 7, 29); inserting a second similar segmented mold core, having a plurality of segments, including a third segment and a fourth segment, the mold core having a bend portion and a straight portion, into the mold cavity (Figure 5, elements 8, 13); injecting a molten polymer into the mold cavity (Column 1, lines 42-50); allowing the molten polymer to, at least partially, set (Column 2, lines 53-54); linearly retracting the first segment of the mold core from the mold cavity in a first direction substantially parallel to the straight portion (Figure 6; Column 2, lines 54-56); translating the first mold core in a direction generally normal to the first direction of linear retraction (Figure 6; Column 1, lines 51-56; Column 2, lines 56-59); linearly

retracting the second segment (Figure 6; Column 2, lines 54-56); linearly retracting the third segment of the mold core from the mold cavity in a second direction (Figure 6; Column 1, lines 51-56; Column 2, lines 56-59); translating the second mold core in a direction generally normal to the second direction of linear retraction (Figure 6; Column 1, lines 51-56; Column 2, lines 54-56); and linearly retracting the second segment (Figure 6; Column 2, lines 54-56).

Regarding Claim 2, Christensen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of selecting the segmented mold core and similar mold core such that each have only two segments (Figure 5, elements 7, 8, 13, 29).

Regarding Claim 3, Christensen shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of selecting segments such that the first and second segments share opposed surfaces and the third and fourth segments share opposed surfaces and further comprise alignment guides on the opposed surfaces (Figure 5, elements 7, 8, 13, 29; Column 2, lines 29-51).

Regarding Claim 5, Christensen shows that it is known to carry out a method of forming a sweep elbow fitting having a bend portion and two straight portions (Figure 1), the method comprising the steps of inserting a segmented mold core, having a first segment and a second segment, the mold core having a bend portion and a straight portion, into a mold cavity, the first segment and the second segment each comprising about half of a cylinder and the first segment further comprising a greater curvature of a bend and the second segment further comprising lesser curvature of the bend and the first segment and the second segment sharing an axially extended interface (Figure 5, elements 7, 8, 13, 29; Column 1, lines 42-50; Column 2, lines 67-

72); injecting a molten polymer into the mold cavity (Column 1, lines 42-50); allowing the molten polymer to, at least partially, set (Column 2, lines 53-54); linearly retracting the first segment of the mold core from the mold cavity in a direction substantially parallel to the axially extending interface (Figure 6; Column 2, lines 54-56); translating the mold core in a direction generally normal to the direction of linear retraction (Figure 6; Column 1, lines 51-56; Column 2, lines 56-59); linearly retracting the second segment from the mold core (Figure 6; Column 2, lines 54-56).

Regarding Claim 7, Christensen shows that it is known to have a mold core for forming a curved fluid passage in a fluid flow fitting (Figure 5), the mold core comprising two segments, each segment having a bend portion and a straight portion and the two segments forming together a miter at the end thereof (Figure 5, elements 7, 8, 13, 29), the two segments being linearly retractable independently of each other and the mold core being movable translationally in a direction substantially normal to a direction of the linear retraction, and the mold core being capable of insertion into and retraction from a mold cavity (Figure 5, elements 7, 8, 13, 29; Column 1, lines 30-56; Column 2, lines 29-65).

Regarding Claim 8, Christensen shows the process as claimed as discussed in the rejection of Claim 7 above, including an apparatus comprising a first segment and a second segment, the first segment comprising an outside sweep core and the second segment comprising an inside sweep core (Figure 5, elements 7, 29).

Regarding Claim 9, Christensen shows the process as claimed as discussed in the rejection of Claim 7 above, including an apparatus further comprising each segment thereof having at least one face in slidable opposition to at least one face of the at least one other

segment, the faces having alignment guides (Figure 5, elements 7, 8, 13, 29; Column 2, lines 29-51).

Regarding Claim 11, Christensen shows that it is known to have a molded fluoropolymer sweep fluid flow fitting having straight, interally generally cylindrical, elongate ends and flat drafts defined in a wall surrounding a lumen thereof (Figures 1-4; Column 2, lines 67-72).

Regarding Claim 12, Christensen shows the process as claimed as discussed in the rejection of Claim 11 above, including a product in which the flat drafts comprise opposed flattened portions on the interior walls of the fitting, the flattened portions having a greatest width located in the vicinity of a bend portion of the fitting and tapering away from the bend portion (Figure 4).

Regarding Claim 14, Christensen shows the process as claimed as discussed in the rejection of Claim 11 above, including a product in which the fitting is a sweep T (Column 2, lines 67-72).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen, in view of Shale (U.S. Patent 3,545,718). Christensen shows the apparatus as claimed as discussed in the rejection of Claim 9 above, but he does not show an interlocking groove. Shale shows that it is known to have an apparatus comprising alignment guides which comprise a boss on a first

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face and an interlocking groove on a second face (Figure 1; Figure 3; Column 1, lines 39-72; Column 2, lines 1-40). Shale and Christensen are combinable because they are concerned with a similar technical field, namely, that of molding operations which form rounded pipes. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Shale's alignment guides in Christensen's apparatus in order to insure that there was no movement between the two segments.

Claim 4, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen, in view of Corbett, Jr. (U.S. Patent 6,328,309).

Regarding Claim 4, Christensen shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). Corbett, Jr. and Christensen are combinable because they are concerned with a similar technical field, namely, that of molding processes which produce pipes. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s material in Christensen's molding process to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Regarding Claim 6, Christensen shows the apparatus as claimed as discussed in the rejection of Claim 5 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s

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material in Christensen's molding apparatus to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Regarding Claim 13, Christensen shows the product as claimed as discussed in the rejection of Claim 11 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s material in Christensen's molded product to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198.

The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica A Huson

Monica A Huson
September 22, 2005

Michael Colaianni

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER